The Impact of a Student-Centered Inquiry-Based Pedagogical Model in a Middle-Level Science Classroom.

Michelle Norwood

ABSTRACT

The purpose of this qualitative Action Research study was to describe a middle-level science teacher’s transition to an inquiry-based, progressivist, student-centered model from a traditional, teacher-centered model as well to document the student-participants’ perceptions of the new model. The study population consisted of one-hundred student-participants, three teacher participants, and one administrator participant. Data was collected at Lakeview Middle School (LMS) (pseudonym) in the low country of South Carolina. The Research Question driving the study: How do middle-level students, accustomed to a traditional teacher-centered curriculum, perceive an inquiry-based, student-centered science classroom based on the Biological Science Curriculum Studies (BSCS) 5E Instructional Model?

1. Regardless of how they perceive the student-centered curriculum, how do the students negotiate the class?
2. What are some of the problems involved in facilitating teacher planning of the 5E Model science curriculum?

In order to answer the research question, an inquiry-based unit titled “The Organization of Life” was developed using the BSCS 5E Inquiry Model in a seventh-grade science class over the course of six weeks in the fall of 2018. Finding include the ways in which students engage with the BSCS 5E Instructional Model enable students to Engage, Explore, Elaborate, Explain, and
Evaluate science instruction and information. An Action Plan based on the findings includes a professional development for inquiry-based STEM at the middle-level in spring of 2019 for science teachers at LMS.

*Key Words:* Action Research, BSCS 5E Instructional Model, Constructivist Pedagogy, Inquiry-Based Learning, Middle-level STEM